

Atlantic Richfield Company

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October 3, 2014

Mr. Steven Way
On-Scene Coordinator
Emergency Response Program (8EPR-SA)
US EPA Region 8
1595 Wynkoop Street
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Delivered via e-mail

**Subject: September 2014 Monthly Progress Report
Rico-Argentine Mine Site – Rico Tunnels
Operable Unit OU01, Rico, Colorado**

Dear Mr. Way,

This progress report describes activities conducted during the month of September, 2014 at the Rico-Argentine Mine Site (site) and activities anticipated to occur during the upcoming month. These activities are organized by task as identified in the Removal Action Work Plan. This progress report is being submitted in accordance with Paragraph 35.a of the Unilateral Administrative Order for Removal Action (the "UAO"), dated March 17, 2011 (effective March 23, 2011).

ACTIVITIES FOR SEPTEMBER

This section describes significant developments during the preceding period including actions performed and any problems encountered during this reporting period.

Site-Wide Activities

- Conducted maintenance on the site access road.
- Field tour and meeting with Steve Way, EPA On-Scene Coordinator, and AR project team on September 25, 2014 to review project progress and to discuss upcoming activities.

Task A – Pre-Design and Ongoing Site Monitoring

- Performed additional evaluation of potential improvements on surface water flow data gathering and telemetry. Continued work on the application for an antenna permit with the Town of Rico.
- Collected groundwater elevation measurements from 17 groundwater monitoring wells in the vicinity of upper ponds 11, 12, 14, 15, and 18 to monitor seasonal groundwater variations.
- Monitored groundwater elevation measurements from 8 groundwater monitoring wells in the vicinity of Ponds 11, 12, and 14 during the various stages of draining of these ponds.
- Inspected the St. Louis Ponds System, water levels, and free-board.
- Downloaded data from pressure transducer in AT-2. Also conducted function tests on the pressure transducer at AT-2 to verify that transducer was working properly.
- Collected data and manual flow measurements from pressure transducers at DR-3 and DR-6.

Task B – Management of Precipitation Solids in the Upper Settling Ponds

- The St. Louis Tunnel discharge was routed to Pond 18 during the month of September, 2014.

- Completed Pond 14 solids removal activities by September 17, 2014. Solids were removed to within 2 ft of the pond base by suction dredge. Solids and some limited amounts of calcine tailings were pumped to Pond 13 for drying and temporary storage.
- Demobilized the barge mounted dredge, all dredging equipment, excavation and other heavy equipment, and Pond 14 solids removal contractor from the site.
- Bypassed water from the outfall of Pond 15 to the inlet of Pond 9 through the 12 inch HDPE bypass line from September 17, 2014 to September 29, 2014 to avoid water entry into Ponds 11, 12, and 14 to facilitate solids volumetric surveys.
- Drained Ponds 11, 12, and 14 and completed remote sensing LIDAR survey scans of post solids removal surfaces of Ponds 11, 12, 13, and 14 to compare to pre-removal surfaces and verify removal quantities.
- The St Louis pond system was observed during the month of September, including free board and condition of spillways. The pond network appears to be flowing well and in good condition.
- Continued planning for removal of all remaining mining/mineral processing by-products from Upper Ponds.

Task C – Design and Construction of a Solids Repository

- Responded on September 22, 2014 to Technical Comments #2 that were received from the Colorado Department of Public Health and Environment (CDPHE) on August 25, 2014 regarding the revised draft EDOP submitted on May 19, 2014. A response to comments memorandum as well as a redlined version of the EDOP were included in the September 22, 2014 submittal.
- Working to finalize the EDOP based on informal comments from CDPHE.
- Continued construction activities for the Solids Repository:
 - Excavation from the repository footprint and stockpiling excavated material.
 - Placement of fill for the new access road, utility corridor, and starter dike for the Phase 1 repository.
 - Installing storm drain and leachate conveyance line from the northwest area of the repository to the outfall at Pond 18.
- Completed installation of conduit for the relocation of the electrical and telephone lines through the Solids Repository. Utility owners have installed their new cables in the underground conduits and are making the changeover to underground lines beginning September 24, 2014 (San Miguel Power) and September 25, 2014 (Farmers' Telephone).
- Completed field surveys and developed easement plat and legal descriptions for the undergrounding power and communications lines in the area of the Solids Repository.
- Executed final easement agreements and filed plat with Dolores County for undergrounding of power and communications lines in the area of the Solids Repository.

Task D – Hydraulic Control Measures for the Collapsed Area of St. Louis Tunnel Adit

- Submitted contractual Scope of Work (including final design Drawings) to USA Environment (on-site contractor) on September 12, 2014 to implement Stage 1 of the agreed remedial measures in 2014.
- Started construction/implementation of Stage 1 for the St. Louis Tunnel hydraulic control system.

Task E – Source Water Investigations and Controls

- Continued Blaine Tunnel water depth and flow monitoring behind the Blaine Coffey Dam and Blaine Tunnel Flume.
- Installed fencing and concrete traffic barriers and improved parking and driving areas at the Blaine Tunnel work area.
- Continued developing responses to comments received from the EPA on June 12, 2014, regarding the *Evaluation of Source Water Controls Report*, which was submitted to EPA on December 31, 2013, in accordance with Subtask E3 of the Removal Action Work Plan. Received



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verbal approval from EPA on September 25, 2014 to extend the deadline for submission of the responses to comments until October 15, 2014.

Task F – Water Treatment System Analysis and Design

- Completed decommissioning of Pilot Scale Wetland in Pond 9 and disposed of all materials and equipment per requirements in the Pilot Wetland Decommissioning work plan. Pilot wetland media has been placed at the IDF for drying, testing and eventual placement into the Solids Repository.
- Completed commissioning of the wetland demonstration.
- Commenced monitoring activities in accordance with the Performance Monitoring Plan (Appendix B of the St. Louis Tunnel Discharge Constructed Wetland Demonstration Treatability Study Work Plan).
 - Weekly sampling events began on September 16, 2014.
 - Continued operations and maintenance activities.
 - Daily water level measurements
 - Field measurements of select parameters
 - Coagulant injection monitoring
 - Routine maintenance
 - Installation of electrical infrastructure, including telemetry system and instrumentation.
 - Installed irrigation system for the subsurface flow wetland.
- Continued grading.
- Submitted Draft OMM Plan for review.
- Continued work on planning and conceptual design of grading/lining selected Upper Ponds for potential conversion to long-term wetlands or open pond lime addition treatment.
- Continued conceptual planning of disposition of Lower Ponds and Upper Ponds not required for long-term wetlands or open pond lime addition treatment.

ACTIVITIES FOR UPCOMING MONTH

This section describes developments expected to occur during the upcoming reporting period, including a schedule of work to be performed, anticipated problems, and planned resolution of past or anticipated problems.

Site-Wide Activities

- Continue improving and maintaining site access road.
- Coordinate with Town of Rico to sample and receive lead impacted soils from the town water line replacement project. Perform XRF analysis on incoming soils per requirements in the project Sampling and Analysis Plan.

Task A – Pre-Design and Ongoing Site Monitoring

- Inspect the St. Louis Ponds System, water levels, and free-board.
- Perform Moderate / Low Flow seasonal sampling event on groundwater and surface water locations throughout the site, as specified in the project Sampling and Analysis Plan.
- Submit final report for the May/June Peak Flow sampling event to the EPA and upload to the project SharePoint site.
- Continue work on submittal and processing of the application for a telemetry antenna permit for the Rico office building.

Task B – Management of Precipitation Solids in the Upper Settling Ponds

- Complete Pond 14 solids removal quantity analysis and report values.
- Continue routing St. Louis Tunnel discharge to Pond 18.



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- Continue planning for removal of all remaining mining/mineral processing by-products from Upper Ponds.

Task C – Design and Construction of a Solids Repository

- Submit final version of EDOP to the CDPHE.
- Submit final version of the EDOP to the EPA upon approval by CDPHE.
- Continue construction of the Solids Repository, including construction of access road realignment, excavation and fill for the Solids Repository cell and run-on control channel, stockpiling reject material from screening operation, and maintenance of the temporary haul road to the excess material storage area.

Task D – Hydraulic Control Measures for the Collapsed Area of St. Louis Tunnel Adit

- Continue implementation of Stage 1 for the St. Louis Tunnel hydraulic control system.

Task E – Source Water Investigations and Controls

- Continue Blaine Tunnel water depth and flow monitoring behind the Blaine Coffey Dam and Blaine Tunnel Flume.
- Finalize and submit to EPA responses to EPA's comments on the *Evaluation of Source Water Controls Report*.

Task F – Water Treatment System Analysis and Design

- Complete construction of the wetland demonstration system, including telemetry system installation, treatment system access road construction, finish grading, and installation of Safety Plan components (fencing, signage, windsock, life rings, snow delineators, and egress ropes).
- Complete the Final Wetland Demonstration Operations, Maintenance and Monitoring Plan.
- Complete conceptual design of the Enhanced Wetland Demonstration.
- Continue scoping additional data needs as necessary related to treatment system alternatives.
- Continue work on planning and conceptual design of removal of all remaining mining/mineral processing by-products from Upper Ponds and grading/lining of selected Upper Ponds for potential conversion to long-term wetlands or open pond lime addition treatment.
- Continue conceptual planning of disposition of Lower Ponds and Upper Ponds not required for long-term wetlands or open pond lime addition treatment.
- Complete Pilot Scale Wetland Decommissioning Plan and initiate decommissioning of Pilot Scale Wetland.

If you have any questions, please feel free to contact me at (951) 265-4277.

Sincerely,



Anthony R. Brown
Project Manager
Atlantic Richfield Company

cc: R. Halsey, Atlantic Richfield
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